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WOOD, PHILLIPS, KATZ, CLARK & MORTIMER  
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SUITE 3800  
CHICAGO, IL 60661

EXAMINER

PIERCE, JEREMY R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 10/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/997,673

Examiner

Jeremy R. Pierce

Applicant(s)

NGAI, MOU-CHUNG

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 14 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-4, 6-13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-4, 6-13 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Amendment A, filed on August 14, 2002, has been entered as Paper No. 7. Claims 5 and 14 have been cancelled. Claims 1, 4, 6, 7, 10, and 13 have been amended.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-4, 6-13, and 15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites the second expansive surface "having a binder composition applied thereto for enhancing surface abrasiveness of said second expansive surface". The specification does not enable one skilled in the art to make the invention because there is nothing in the claims or specification that indicates what might constitute a binder composition.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-4, 6-13, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a binder composition that enhances surface abrasiveness of a surface. How does the binder composition enhance surface abrasiveness? Is the binder composition itself formed of material that is abrasive? Does the binder composition only act to stiffen the fibers of the nonwoven surface? What type of binder is required to meet the abrasiveness requirement?

***Claim Rejections - 35 USC § 102/103***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, 8, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Butterworth et al. (U.S. Patent No. 4,082,886).

Butterworth et al. disclose a nonwoven fibrous material comprising a facing region, absorbent reservoir region, and a capillary distribution region (column 2, lines 17-62). To provide abrasion resistance to the facing layer, an adhesive binder is

applied to it in the amount of 1 percent by weight (column 5, lines 44-56). Butterworth does not disclose hydroentangling the nonwoven, but does disclose that the fibers intersect, overlap and are mechanically engaged (Abstract and Figure 2). The Examiner asserts that although Applicant claims a hydroentangled web, the product set forth in claim 1 would not be materially different than that presented in Butterworth et al. Since Butterworth et al. describe the nonwoven as mechanically engaged fibers; it would have been obvious to a person having ordinary skill in the art to select hydroentanglement as the means for providing a nonwoven web described by Butterworth et al., since hydroentanglement is such a well-known method in the art, and selection of this method would be a matter of obvious design choice. With regard to claim 8, the first outer layer would be the capillary distribution layer of Butterworth et al. and the second outer layer would be the facing region of Butterworth et al. The capillary distribution layer is comprised substantially of cellulosic fibers, represented by natural and synthetic wood pulp (column 6, lines 30-37). The facing region is comprised of a blend of natural wood pulp fibers and synthetic wood pulp fibers (column 5, lines 26-33), so it has both cellulosic fibers and synthetic fibers. With regard to claim 11, the absorbent reservoir region would comprise the intermediate layer (column 6, lines 1-27).

***Claim Rejections - 35 USC § 103***

9. Claims 1-4, 6, 7, 11, and 15 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Greenway (U.S. Patent No. 4,753,839) in view of Wong et al. (U.S. Patent No. 5,213,588).

Welchel et al. disclose a hydroentangled nonwoven fabric formed from two different fiber sources (column 2, lines 34-37). One surface is made of matrix fibers, such as polyester (column 2, line 51), and the other surface is made of absorbent fibers, such as cellulosic fibers and rayon (column 4, lines 38-40). Welch et al. do not teach applying an abrasive coating to the fabric for cleansing purposes. Wong et al. disclose adding abrasive particles in a coating to nonwoven wiping materials to enhance soil and stain removal performance (column 1, lines 64-68). Wong et al. further suggest that the abrasive coating of their invention can be applied to any conventionally fashioned nonwoven sheet with suitable characteristics (column 3, lines 65-68). It would have been obvious to one having ordinary skill in the art to apply the abrasive coating provided by Wong et al. to the nonwoven fabric taught by Welch et al. in order to create a cleaning wipe with enhanced soil and stain removing properties. With regard to claims 2-4, it would have been obvious to a person having ordinary skill in the art to differentiate the opposite surfaces by dyeing either the fibers or the binder material present on the respective surfaces different colors. Making the two surfaces different colors is an obvious matter of design choice. With regard to claims 6 and 7, Wong et al. disclose applying the abrasive coating in a pattern onto the nonwoven fabric (column 2, lines 52-55). A coating applied in a pattern is scattered across the fabric in a non-random fashion. With regard to claim 11, Welch et al. disclose a second layer of synthetic matrix fibers can be added to the first layer of matrix fibers, thus making the first layer an intermediate layer. With regard to claim 15, Welch et al. disclose apertures are formed during the hydroentangling process (column 8, lines 23-27).

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10. Claims 1-4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenway (U.S. Patent No. 4,753,839) in view of Wong et al.

Greenway discloses a nonwoven fabric, made of at least one layer, subjected to hydroentanglement (column 2, lines 30-34). Greenway does not disclose specific two layer embodiments in the invention. However, Greenway does state that multiple layers of various combinations of blends of fibers may be used to give variations of the fabric (column 3, lines 50-55). The fabric disclosed by Greenway is used in everyday washing and cleaning purposes (column 8, lines 14-27). But Greenway does not teach applying an abrasive coating to the fabric for cleansing purposes. Wong et al. disclose adding abrasive particles in a coating to nonwoven wiping materials to enhance soil and stain removal performance (column 1, lines 64-68). Wong et al. further suggest that the abrasive coating of their invention can be applied to any conventionally fashioned nonwoven sheet with suitable characteristics (column 3, lines 65-68). It would have been obvious to one having ordinary skill in the art to apply the abrasive coating provided by Wong et al. to the nonwoven fabric taught by Greenway in order to create a cleaning wipe with enhanced soil and stain removing properties. With regard to claims 2-4, it would have been obvious to a person having ordinary skill in the art to differentiate the opposite surfaces by dyeing either the fibers or the binder material present on the respective surfaces different colors. Making the two surfaces different colors is an obvious matter of design choice. With regard to claims 6 and 7, Wong et al. disclose applying the abrasive coating in a pattern onto the nonwoven fabric (column 2, lines 52-55). A coating applied in a pattern is scattered across the fabric in a non-

random fashion. With regard to claims 8-10, Greenway discloses four different possible layers that can be blended together, including a blend of 85% rayon with 15% polyester, 50% rayon with 50% polyester, 100% cellulosic, or 100% thermoplastic. It would have been obvious to one skilled in the art to combine one layer of 100% rayon with another layer of 50% rayon with 50% polyester in order to form a hydroentangled nonwoven with the feel and abrasion resistant properties of the respective layers, as is suggested to be done by Greenway.

11. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenway in view of Wong et al. as applied to claim 1 above, and further in view of Buyofsky et al. (U.S. Patent No. 4,810,568).

The various layer embodiments of Greenway could be construed to contain a third intermediate layer of 100% synthetic fibers, since Greenway teaches the fabric could be multi-layered and discloses the use of a layer that is 100% synthetic. However, Buyofsky et al. disclose a nonwoven composite used as a wipe with excellent abrasion resistance, dimensional stability, and absorbency (column 1, lines 47-60). Two entangled layers are coated with an abrasive binder, and then laminated together with a thermoplastic reinforcement layer in-between, which offers dimensional stability to the composite (column 2, lines 36-64). It would have been obvious to one having ordinary skill in the art to use a reinforcement layer in the nonwoven of Greenway in combination with Wong et al. in order to increase the dimensional stability of the composite, as taught by Buyofsky et al.



### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1-4, 6-13, and 15 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicant argues that abrasive characteristics are being provided by abrasive particles rather than the binder composition itself. However, the abrasive particles are part of the binder composition. Therefore, the binder composition containing abrasive particles would satisfy the requirement for a binder composition enhancing surface abrasion. Applicant does not set forth in the claims or specification how the binder composition of the present invention should differ from what is disclosed in the references.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

jrj  
October 9, 2002

*Elizabeth M. Cole*  
ELIZABETH M. COLE  
PRIMARY EXAMINER